



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/573,973

02/22/2007

Keiji Sakamoto

P29617

9933

7055 7590 02/05/2009  
GREENBLUM & BERNSTEIN, P.L.C.  
1950 ROLAND CLARKE PLACE  
RESTON, VA 20191

EXAMINER

HENRY, MICHAEL C

ART UNIT

PAPER NUMBER

1623

NOTIFICATION DATE

DELIVERY MODE

02/05/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
pto@gbpatent.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/573,973	<b>Applicant(s)</b> SAKAMOTO ET AL.	
	<b>Examiner</b> MICHAEL C. HENRY	<b>Art Unit</b> 1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 and 10 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/23/08</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/23/08 has been entered.

The amendment filed 12/23/08 affects the application, 10/573,973 as follows:

1. Claim 1-3, 5, 6 have been amended. Claim 4 has been canceled. Applicant's amendments have overcome the rejections made under 35 U.S.C. 112, second paragraph and under 35 U.S.C. 102 and 103(a). Consequently, the said rejections are withdrawn. However, a new ground(s) rejection is set forth herein below.
2. The responsive to applicants' arguments is contained herein below.

Claims 1-3 and 5-10 are pending in application

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the phrase "stabilizing a vitamin". However, the claim is indefinite since it is unclear how said vitamin is stabilized or what it is stabilized from or what constitutes a stabilization.

Art Unit: 1623

***Claim Rejections - 35 USC § 102***

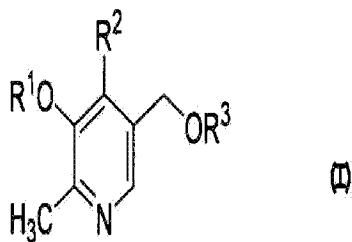
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Shionogi and Co., Ltd. (FR 2196793 A2, Abstract Only).

In claim 1, applicant claims a compound represented by the following general formula (I) or a salt thereof:

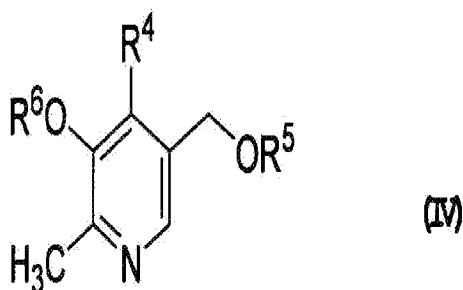


wherein R<sup>1</sup> represents a phosphate group or a cyclic phosphate group bound to R<sup>2</sup>; R<sup>2</sup> represents -CH<sub>2</sub>OH, -CHO, -CH<sub>2</sub>NH<sub>2</sub>, -CH<sub>2</sub>-amino acid residue, or -CH<sub>2</sub>-OPO<sub>2</sub>H; and R<sup>3</sup> represents hydrogen atom, or -PO<sub>3</sub>H<sub>2</sub>. Shionogi and Co., Ltd. disclose applicant's compound represented by the general formula (I) wherein R<sup>1</sup> represents a phosphate group; R<sup>2</sup> represents -CH<sub>2</sub>OH; and R<sup>3</sup> represents hydrogen atom (see abstract). Shionogi and Co., Ltd.'s compound has a Cas # of 1883-15-4 (see abstract). It should be noted that applicant's compound is also named 5'-pyridoxine phosphate and 3,4-pyridinedimethanol,6-methyl-5-(phosphonooxy)- (see abstract).

Art Unit: 1623

Claim 2 is drawn to the compound or a salt thereof according to claim 1, which is selected from the group consisting of pyridoxine 3-phosphate, pyridoxine 3,4'cyclic phosphate, and N-(4 pyridoxylmethylene)-L-serine 3-phosphate, or a salt thereof. Shionogi and Co., Ltd.'s disclose applicant's compound, pyridoxine 3-phosphate (see abstract). Shionogi and Co., Ltd.'s compound has a Cas # of 1883-15-4 (see abstract). It should be noted that applicant's compound is also named 5'-pyridoxine phosphate and 3,4-pyridinedimethanol,6-methyl-5-(phosphonooxy)- (see abstract).

Claim 3 is drawn to a compound represented by the following general formula (IV) or a salt thereof:

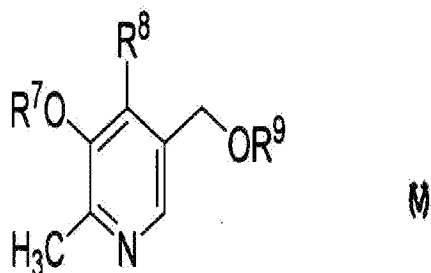


wherein R<sup>4</sup> represents -CH<sub>2</sub>OH, -CHO, or -CH<sub>2</sub>NH<sub>2</sub>, or represents -CH<sub>2</sub>OH, -CHO, or -CH<sub>2</sub>NH<sub>2</sub> protected with a protective group; R<sup>5</sup> represents hydrogen atom, a protective group of hydroxyl group, a phosphate group, or a protected phosphate group; and R<sup>6</sup> represents a phosphate group which may have a protective group. Shionogi and Co., Ltd. disclose applicant's compound represented by the general formula (IV) wherein R<sup>6</sup> represents a phosphate group; R<sup>4</sup> represents -CH<sub>2</sub>OH; and R<sup>5</sup> represents hydrogen atom (see abstract). Shionogi and Co., Ltd.'s compound has a Cas # of 1883-15-4 (see abstract). It should be noted that applicant's compound

Art Unit: 1623

is also named 5'-pyridoxine phosphate and 3,4-pyridinedimethanol,6-methyl-5-(phosphonooxy)- (see abstract).

In claim 5, applicant claims a composition for a cosmetic, a medicament, a foodstuff, and/or a feed comprising a compound represented by the following general formula (V) or a salt thereof:



wherein R<sup>7</sup> represents a phosphate group, a sulfate group, or a cyclic phosphate group bound to R<sup>8</sup>; R<sup>8</sup> represents -CH<sub>2</sub>OH, -CHO, -CH<sub>2</sub>NH<sub>2</sub>, -CH<sub>2</sub>-amino acid residue, or -CH<sub>2</sub>-OPO<sub>2</sub>H; and R<sup>9</sup> represents hydrogen atom, or -PO<sub>3</sub>H<sub>2</sub>. Shionogi and Co., Ltd. disclose applicant's composition or compound represented by the general formula (V) wherein R<sup>7</sup> represents a phosphate group; R<sup>8</sup> represents -CH<sub>2</sub>OH; and R<sup>9</sup> represents hydrogen atom (see abstract). Shionogi and Co., Ltd.'s compound has a Cas # of 1883-15-4 (see abstract). It should be noted that applicant's compound is also named 5'-pyridoxine phosphate and 3,4-pyridinedimethanol,6-methyl-5-(phosphonooxy)- (see abstract). It should be noted that it is well settled that "intended use" of a composition or product, e.g., for a cosmetic or a medicament, does not further limit claims drawn to a composition or product. See, e.g., *Ex parte Marsham*, 2 USPQ2d 1647 (1987) and *In re Hack* 114, USPQ 161.

Art Unit: 1623

In claim 8, applicant claims the composition for cosmetics according to claim 5, which is a whitening agent, an anti-aging agent, and/or an agent for suppressing wrinkle formation by exposure to ultraviolet light. Shionogi and Co., Ltd. disclose applicant's composition or compound represented by the general formula (V) wherein R<sup>7</sup> represents a phosphate group; R<sup>8</sup> represents -CH<sub>2</sub>OH; and R<sup>9</sup> represents hydrogen atom (see abstract). Shionogi and Co., Ltd.'s compound has a Cas # of 1883-15-4 (see abstract). It should be noted that applicant's compound is also named 5'-pyridoxine phosphate and 3,4-pyridinedimethanol,6-methyl-5-(phosphonooxy)- (see abstract). It should be noted that it is well settled that "intended use" of a composition or product, e.g., for a cosmetic or a medicament, does not further limit claims drawn to a composition or product. See, e.g., *Ex parte Marsham*, 2 USPQ2d 1647 (1987) and *In re Hack* 114, USPQ 161. It should be noted that Trumbo et al.'s compound or composition is the same as applicant's and therefore it should inherently possess the same property of being a whitening agent or an anti-aging agent.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shionogi and Co., Ltd. (FR 2196793 A2, Abstract Only).

Art Unit: 1623

In claim 7, applicant claims a composition for a cosmetic, a medicament, foodstuff, and/or a feed containing a compound represented by the general formula (V) or a salt thereof mentioned in claim 5 and at least one kind of vitamin, wherein stability of the vitamin is improved.

Shionogi and Co., Ltd. disclose applicant's compound represented by the general formula (I) wherein  $R^1$  represents a phosphate group;  $R^2$  represents  $-CH_2OH$ ; and  $R^3$  represents hydrogen atom (see abstract). Shionogi and Co., Ltd.'s compound has a Cas # of 1883-15-4 (see abstract). It should be noted that applicant's compound is also named 5'-pyridoxine phosphate and 3,4-pyridinedimethanol,6-methyl-5-(phosphonooxy)- (see abstract). Also, it is known in the art that Shionogi and Co., Ltd.'s compound can be utilized as vitamin B6 (pyridoxine).

The difference between applicants claimed composition and the composition of Shionogi and Co., Ltd. is that applicant's composition also contains another vitamin.

It would have been obvious to one having ordinary skill in the art, at the time the claimed invention was made, to prepare a composition comprising a combination of Shionogi and Co., Ltd.'s compound and another vitamin which have the same utility in order to use it in nutritive, food stuff or a medicament.

One having ordinary skill in the art would have been motivated, to prepare a composition comprising a combination of Shionogi and Co., Ltd.'s compound and another vitamin which have the same utility in order to use it in a nutritive, a food stuff or a medicament.

***Allowable Subject Matter***

The following is an examiner's statement of reasons for allowance: The examiner has found claims 6, 9, 10 to be unobvious over the prior art of record and therefore to be allowable



Art Unit: 1623

over the prior art of record. The present invention relates to a compound or composition represented by a given general formula or a salt thereof. However, although the claims are rejected as set forth above, the composition of claims 9 and 10 of the instant invention, are different and unobvious to those of the prior art.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-3 and 5-10 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Henry whose telephone number is 571-272-0652. The examiner can normally be reached on 8.30am-5pm; Mon-Fri. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia A. Jiang can be reached on 571-272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael C. Henry  
August 12, 2008.

/Shaojia Anna Jiang/  
Supervisory Patent Examiner  
Art Unit 1623